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ABSTRACT

A traditional dichotomy has always existed between the quantitative origins of computers and the subjective and expressive nature of art. Computer technology, however, has become simultaneously more sophisticated in its application and more simplified in its use. Computers can now serve as viable and productive components of an art education curriculum. In this digest, nine reasons for integrating computers into the art education classroom are identified and articulated: (1) Ease of use--current models come complete with pre-installed software; (2) Versatility--laser printing has advanced to the level that creating images without formal instruction is relatively simple; (3) Relevance--artists have always worked in the latest media; (4) Interest--interest in computers is so ubiquitous that it may attract students who have previously evinced little interest in the discipline; (5) Status--computers come with their own cache of technology and progress that may help bolster support for the art program; (6) Collaboration and Professional Development--establishment of a computer laboratory could result in greater peer interaction and integration of the arts curriculum throughout the school; (7) Art Education and the Internet--the World Wide Web provides access to thousands of Internet sites that can assist professional development; (8) A Creative Tool--computer art applications make it possible to do things that are possible in no other medium; (9) An Experimental Medium--computers are unrivaled as a tool for two-dimensional visual experimentation; and (10) Key to Commercial Employment--virtually all commercial art is now done on computers. A 10-item bibliography of references and resources within the ERIC system is included. (MJP)

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Jonathan C. Matthews

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Computers and Art Education

by Jonathan C. Matthews

Many art educators do not use computers in their teaching. Computers, unlike clay, pigment, and charcoal, seem foreign to them. Even the word "computer" connotes that these techno-boxes are best-suited for rapid number crunching. For this reason, computers are seen as tools of the quantitative realm, at the pole opposite the arts. In art, one deals with the expressive manipulation of visual qualities. This qualitative arts realm is in constant competition with the powerful quantitative realm. Math, science, aptitude test scores, and other quantitative interests crowd the arts into a tiny corner of the school week. As long as the computer is seen primarily as a tool of the quantitative realm, it is likely to be regarded by art educators as alien.

If computers ever were enemies of art, this is not so anymore. No longer is knowledge of complex computer languages required to use a computer. Color, pattern, shape, and line, the qualitative elements of the visual arts, have pushed quantitative computer command codes into hiding. Graphic designers have recast the face of the computer screen so that those of us without any computer savvy can — as the experts put it — "plug and play." Now, from the moment we turn on the machine, we are in a world of imagery. Though some art educators have hesitated to become involved with computers, those machines have learned to speak the art educators' language. While art educators will continue to work with traditional media, there are many reasons why they should also teach computer art to their students.

Ease of Use. All current models of personal computers come "plug and play." Turn the machine on and the user is greeted with groupings of icons, small color symbols representing the various software that is pre-installed on the machine. A graphics-outfitted computer will have one or more icons for its graphic arts applications. With a click of the mouse, a painting or drawing screen appears with new icons depicting a variety of art media choices: charcoal, ink, oil, spray paint, pastel, and watercolor. Simply click the mouse on the appropriate icon to choose the medium and instantly the cursor becomes a paintbrush, spray can, or other tool.

Versatility. A color laser print of a computer-generated "oil painting" can look indistinguishable from a book or magazine reproduction of an actual oil painting. But the creative possibilities of computer art go far beyond merely imitating traditional media. Without formal instruction, one can quickly create surprisingly satisfying images. Of course, as with any medium, expert knowledge counts for a lot. Studying the graphics software manual allows mastery of the technical procedures that allow even more control of the software.

Relevance. Throughout history, artists have always worked in the latest media. Many artists from the past were criticized in their own times for embracing new media and styles. To refuse to use computers in art education is to increase the probability that one's students will be left behind, caught on the wrong side of history. The embrace of new media is not a rejection of the old. It is simply an important expansion of one's creative armamentarium. Art educators need to help their students become competent in this most powerful visual art medium.

Interest. Perhaps because of their early familiarity with the video screen, children of all ages are interested in computers; many seemed compelled to use them. Art educators who teach computer art may therefore attract many students who otherwise might never discover art's riches. Computers might be the enticing door that delivers students into a world of aesthetic possibility.

Status. For a number of reasons, art education is less highly valued by administrators, parents, and society than many other school subjects. Once administrators, parents, and community discover that an art educator is going to teach their children to master the creative possibilities of the computer, that art educator may find that his or her perceived relevance and importance have soared. While there are many intrinsically good reasons to bring computers into an art education program, a significant extrinsic reward is the increased support and status that the art program may enjoy.

Collaboration and Professional Development. Computers are popular and versatile. An art educator who runs a computer lab will find that educators from other curricular areas may express increased interest in interdisciplinary collaboration. This could lead to the visual arts being integrated throughout the school curriculum. This increased interaction with peers in various curricular areas could lead to positive professional development and greater job satisfaction for the art educator. In short, the possibilities for professional growth are tremendous for a computer-active art educator.

Art Education and the Internet. Through the World Wide Web, an art educator with a computer gains instant access to thousands of Internet sites that can assist professional development. Type "art lessons" into the search-box of any web browser and the screen will be filled with a long list of "point and click" titles that lead to Web sites full of art lessons. Most of these lessons have been created and posted by K-12 art educators. Ask them questions about their lessons via the instant text communication possible with electronic mail. Need visuals?

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Many museums have placed their whole collections on the Web. CDS are available with vast amounts of art on them. Doing a unit on Southwestern art? A class can have an interactive, electronic mail conversation with a Navajo potter in Window Rock, Arizona. People from around the world with shared interests can carry on keyboard conversations through on-line "chat sites."

A Creative Tool. Making art on the computer is much more than simply imitating images possible in more traditional media. Computer art applications make it possible to do things that are possible in no other medium. Computers also handle some traditional graphic arts creative challenges much better than other methods. Thus, they have made these other methods obsolete. The computer is a great place to try out artistic ideas. An original sketch can be saved, then limitless additional copies of that sketch can be altered and saved. One can then easily view each of these variations in succession, or display reduced copies simultaneously on the same screen. To accomplish this same sort of artistic deliberation in traditional media might take weeks.

An Experimental Medium. Artistic daring and experimentation can be increased greatly with a computer, primarily because it is virtually impossible to "ruin" a computer crafted artwork. Limitless copies can be saved with a key stroke at each point on the creative path. This allows the artist to branch off and explore risky possibilities that otherwise would not be dared. There is also a key that allows one to "undo" whatever change one last made to the work. Digital image capture allows the easy mix of photography, video, and drawing and painting on a computer. Scanners make possible the incorporation of any existing image into the artist's current computer image, to be transformed in any way the artist desires. While there are many sorts of art objects that cannot be created on a computer, it is unrivaled as a tool for two-dimensional visual experimentation.

A Key to Commercial Employment. Virtually all commercial art — illustration, product design, architectural design, industrial design, advertising, publishing and animation — is now done on a computer. Ten years ago, most of the creative people in these disciplines worked at drafting tables; now the drafting tables have been replaced by computers. The artist at the computer can simply do good work faster than on paper. Art educators who fail to teach their students computer art skills limit their ability to win commercial art employment.

We live in the computer age, and vital art necessarily reflects and interacts with dominant contemporary forces. While continuing to embrace traditional media, art teachers should carefully consider the merits of exploring the educational possibilities of the computer.

References and ERIC Resources. The following list of resources includes references used to prepare this Digest. The items followed by an ED number are available in microfiche and/or paper copies from the ERIC Document Reproduction Service (EDRS). For information about prices, contact EDRS, 7420 Fullerton Road, Suite 110, Springfield, Virginia 22153-2852; telephone numbers are (703) 440-1400 and (800) 443-3742. Entries followed by an EJ number, annotated monthly in CURRENT INDEX TO JOURNALS IN EDUCATION (CIJE), are not available through EDRS. However, they can be located in the journal section of most larger libraries by using the information provided or requested through Interlibrary Loan.

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